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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/040,254

**Applicant(s)**

VALET, THIERRY

**Examiner**

Jeff Piziali

**Art Unit**

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1/24/08, 5/7/07, 5/12/06, and 9/26/05.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-10, 13-18 and 20-24 is/are pending in the application.  
4a) Of the above claim(s) 16-18, 20 and 21 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5, 7-10, 13-15 and 22-24 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 26 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-846)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Species I, Sub-Species A (i.e., claims 1-5, 7-10, 13-15, and 22-24 in the reply filed on 7 May 2007 is acknowledged.
2. Claims 16-18, 20, and 21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7 May 2007.
3. Restriction to one of the following inventions may be required in the future under 35 U.S.C. 121:
  - I. Claims 1-5, drawn to a hand-held device, classified in class 345, subclass 169 (portable peripheral input devices).
  - II. Claims 22-23, drawn to a device, classified in class 345, subclass 158 (peripheral input devices including orientation sensors).
  - III. Claims 7-10, 13-15, and 24, drawn to a method, classified in class 438, subclass 48 (making devices responsive to signals).

The inventions may be distinct, each from the other because of the following reasons:

4. ***Inventions I and II*** may be related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not

require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed may not require the particulars of the subcombination as claimed. The subcombination may also have separate utility.

5. ***Inventions III and I*** may be related as process of making and product made. ***Inventions III and II*** may be related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)).

6. At present, Inventions I-III as presently claimed are indefinite to such a degree that it remains unclear for certain whether restriction is necessary. However, the Applicant is respectfully informed that should the indefiniteness of the claimed inventions be corrected in the future, a restriction requirement may be necessary to preclude a burdensome search and examination. Indefinite claim language and the incorporation of plural inventions into a single patent application diffuses the examiner's search, making it more difficult to guarantee that the best prior art has been located and applied.

*Specification*

7. The disclosure is objected to because of the following informalities:

The 'CROSS REFERENCE TO RELATED APPLICATIONS' section should include the U.S. Provisional Application Number (see page 1, lines 11-13).

The phrase, "*is need for*" should be changed, for example to, "*is needed for*" (see page 8, line 22).

The phrase, "*as to creating a vector*" should be changed, for example to, "*as to create a vector*" (see page 8, line 31).

Appropriate correction is required.

8. The use of trademarks (such as "*PALM*"; "*PALMPILOT*"; "*ORANG-OTANG*") has been noted in this application (see page 6, line 30; page 7, lines 8 and 12). Trademarks should be capitalized wherever they appear and be accompanied by the respective generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

9. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the "*scalability feature*" recited in claim 9; and the "*navigation capability of the physical map*" recited in claim 10.

10. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Drawings***

11. The drawings were received on 26 September 2005. These drawings are acceptable.

***Claim Rejections - 35 USC § 112***

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 9 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There exists no enabling disclosure in the instant specification for the claimed subject matter: The "*scalability feature*" recited in claim 9; and the "*navigation capability of the physical map*" recited in claim 10.

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 1-5, 7-10, 13-15, and 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

16. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "*a tracking means for sensing movements*" (in line 4). It would be unclear to one having ordinary skill in the art whether the "*tracking means*" does any actual "*tracking*" of anything (and if so, of what?); or rather whether the claimed "*tracking means*" does nothing other than "*sense movements*" (i.e., more of a "*movement sensing means*" really).

17. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being dependent upon a rejected base claim.

18. Claim 3 recites the limitation "*the tracked movements*" (in line 1). There is insufficient antecedent basis for this limitation in the claim.

19. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: *"the angle formed between the accelerometer chip and the circuit board"* (in claim 4, lines 1-2) and *"an accelerometer chip mounted at a non-perpendicular angle with respect to the circuit board"* (in claim 1, lines 5-6). It would be unclear to one having ordinary skill in the art whether there is a single identical *"angle"* being claimed; or rather whether there are plural distinct and independent *"angles"* being claimed.

20. Claim 5 recites the limitations: *"displayed"* (in line 2) and *"redefined"* (in line 2). There is insufficient antecedent basis for these limitations in the claim.

21. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: *"displayed"* (in line 2). It would be unclear to one having ordinary skill in the art what claimed element is even capable of providing a *"displaying"* function.

An omitted structural cooperative relationship results from the claimed subject matter: *"redefined"* (in line 2). It would be unclear to one having ordinary skill in the art when, where, and how the *"certain portion displayed"* was ever *"defined"* in the first place.



22. Claim 7 recites the limitation "*the accelerometer chip*" (in line 1). There is insufficient antecedent basis for this limitation in the claim.

23. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "*an angle*" (in claim 7, line 2) and "*an angle*" (in claim 24, line 2). It would be unclear to one having ordinary skill in the art whether there is a single identical "*angle*" being claimed; or rather whether there are plural distinct and independent "*angles*" being claimed.

24. Claim 8 recites the limitation "*plane*" (in line 2). There is insufficient antecedent basis for this limitation in the claim.

25. Claim 9 recites the limitations: "*user input*" (in line 2) and "*tracked movement*" (in line 2). There is insufficient antecedent basis for these limitations in the claim.

26. Claim 10 recites the limitation "*the scalability*" (in line 3). There is insufficient antecedent basis for this limitation in the claim.

27. Claim 13 recites the limitations: "*the accelerometer chip*" (in line 1) and "*plane*" (in line 2). There is insufficient antecedent basis for these limitations in the claim.

28. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being dependent upon a rejected base claim.

29. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being dependent upon a rejected base claim.

30. Claim 22 recites the limitations: "*X and Y planes*" (in lines 3-4); "*Z-axis*" (in line 4); "*elected*" (in line 5); "*reduce*" (in line 5); and "*the Z footprint*" (in line 5). There is insufficient antecedent basis for these limitations in the claim.

31. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "*X and Y planes*" (in lines 3-4); "*Z-axis*" (in line 4); "*elected*" (in line 5); "*reduce*" (in line 5); and "*the Z footprint*" (in line 5).

It would be unclear to one having ordinary skill in the art what the variables "*X, Y, and Z*" are supposed to represent. Can the "*X plane*" extend along the "*Z-axis*"?

It would be unclear to one having ordinary skill in the art how, what, and how the "*angles*" are "*selected*."

It would be unclear to one having ordinary skill in the art what basis or foundation the "*Z footprint*" is "*reduced*" from.

32. Claim 23 recites the limitations: "*selected*" (in line 2); "*reduce*" (in line 2); and "*the Z footprint*" (in line 2). There is insufficient antecedent basis for these limitations in the claim.

33. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "*selected*" (in line 2); "*reduce*" (in line 2); and "*the Z footprint*" (in line 2).

It would be unclear to one having ordinary skill in the art how, what, and how the "*angles*" are "*selected*." In what manner does a "*selection*" differ from an "*election*"?

It would be unclear to one having ordinary skill in the art what basis or foundation the "*Z footprint*" is "*reduced*" from.

It would be unclear to one having ordinary skill in the art what the variable "*Z*" is supposed to represent.

34. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "*an angle*" (in line 3) and "*the angle formed between the circuit board and the accelerometer*" (in lines 3-4). It would be unclear to one having ordinary skill in the art whether there is a single identical "*angle*" being claimed; or rather whether there are plural distinct and independent "*angles*" being claimed.

#### *Claim Rejections - 35 USC § 102*

35. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

36. Claims 1-3, 5, 8, and 13-15, and 22-24 are rejected under 35 U.S.C. 102(a) as being anticipated by the *Applicant's Admitted Prior Art (AAPA)*.

Regarding claim 1, the AAPA discloses a hand-held device [Fig. 2; 20] comprising: a circuit board; a processor means [Fig. 4; 110] attached to said circuit board; a tracking means [Fig. 4; 116] for sensing movements of the device wherein the tracking means contains an

accelerometer chip mounted at a non-perpendicular angle with respect to the circuit board (see page 1, line 16 - page 3, line 6 and page 6, line 3 - page 8, line 14).

The examiner respectfully notes that the Applicant's admission that "*some of the accelerometers must be mounted perpendicular to the circuit board*" (see page 6, bottom paragraph, lines 2-3 of the Amendment filed 24 January 2008) supports the examiner's reliance upon The Applicant's Admitted Prior Art as grounds for rejection. If "*some of the accelerometers must be mounted perpendicular to the circuit board*" then it must inherently follow that at least one accelerometer must *not* be mounted perpendicular to the circuit board.

Regarding claim 2, the AAPA discloses the device is a personal digital assistant [Fig. 2; 20] (see page 6, lines 6-12).

Regarding claim 3, the AAPA discloses the tracked movements are used to control a display [Fig. 2; 28] (see page 7, lines 10-21).

Regarding claim 5, the AAPA discloses an orientation of a certain portion displayed is redefined in response to a request by a user (see page 6, lines 13-20).

Regarding claim 8, the AAPA discloses the accelerometer detects acceleration in more than one plane (see Fig. 4; page 3, lines 1-6).

Regarding claim 13, the AAPA discloses the accelerometer chip is capable of sensing motion in more than one plane due to said angle (see Fig. 4; page 3, lines 1-6).

Regarding claim 14, the AAPA discloses the accelerometer produces signals used to control an electrical device [Fig. 2; 20] (see page 6, lines 6-12).

Regarding claim 15, the AAPA discloses the device is a hand-held computer [Fig. 2; 20] (see page 6, lines 6-12).

Regarding claim 22, the AAPA discloses a device [Fig. 2; 20] comprising: a circuit board; an accelerometer [Fig. 4; 116] mounted to the circuit board at a first angle with respect to X and Y planes [Fig. 4; X, Y] and at a second angle with respect to a Z-axis [Fig. 4; Z] wherein the first angle and the second angle are elected to reduce the Z footprint (e.g., the hand-held device footprint in Fig. 2 is "reduced" compared to the desktop PC footprint in Fig. 1) of the device (see page 1, line 16 - page 3, line 6 and page 6, line 3 - page 8, line 14).

Regarding claim 23, the AAPA discloses the first angle and the second angle are selected to reduce the Z footprint (e.g., hand-held device footprint compared to a desktop PC footprint) of the device (see page 1, line 16 - page 3, line 6 and page 6, line 3 - page 8, line 14).

Regarding claim 24, the AAPA discloses a method comprising: providing a circuit board mounting an accelerometer [Fig. 4; 116] on the circuit board at an angle, wherein the angle

formed between the circuit board and the accelerometer is acute (see page 1, line 16 - page 3, line 6 and page 6, line 3 - page 8, line 14).

The examiner respectfully notes that the Applicant's admission that "*some of the accelerometers must be mounted perpendicular to the circuit board*" (see page 6, bottom paragraph, lines 2-3 of the Amendment filed 24 January 2008) supports the examiner's reliance upon The Applicant's Admitted Prior Art as grounds for rejection. If "*some of the accelerometers must be mounted perpendicular to the circuit board*" then it must inherently follow that at least one accelerometer must *not* be mounted perpendicular to the circuit board. And a non-perpendicular angle between the circuit board and the accelerometer will result in one acute angle and one obtuse angle (combined, the two angles will equal 180 degrees).

37. Claims 1-3, 14, 15, and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by *Darley et al (US 6,122,340 A)*.

Regarding claim 1, Darley discloses a hand-held device [Fig. 7; 100] (see Column 4, Line 27 -- wherein the housing unit is designed to be readily removed by hand) comprising: a circuit board [Fig. 7; 700]; a processor means attached to said circuit board (see Column 6, Lines 6-53); a tracking means for sensing movements of the device wherein the tracking means contains an accelerometer chip [Fig. 7; 704] mounted at a non-perpendicular angle [Fig. 7;  $\Theta$ ] with respect to the circuit board (see Column 8, Line 62 - Column 9, Line 20).

Regarding claim 2, Darley discloses the device is a personal digital assistant (see Column 6, Lines 37-53 -- e.g., wherein the device assists the user by calculating a person's pace).

Regarding claim 3, Darley discloses the tracked movements are used to control a display (see Column 6, Lines 37-53).

Regarding claim 14, Darley discloses the accelerometer produces signals used to control an electrical device (see Column 6, Lines 6-53).

Regarding claim 15, Darley discloses the device is a hand-held computer (see Column 6, Lines 37-53).

Regarding claim 22, Darley discloses a device [Fig. 7; 100] (see Column 4, Line 27) comprising: a circuit board [Fig. 7; 700]; an accelerometer [Fig. 7; 704] mounted to the circuit board at a first angle with respect to X and Y planes and at a second angle with respect to a Z-axis [Fig. 7;  $\Theta$ ] wherein the first angle and the second angle are elected to reduce the Z footprint of the device (see Fig. 1; Column 8, Line 62 - Column 9, Line 20 -- wherein the user's footprint is made no larger with the device attached).

Regarding claim 23, Darley discloses the first angle and the second angle are selected to reduce the Z footprint of the device (see Fig. 1; Column 2, Line 54 - Column 4, Line 39 -- wherein the user's footprint is made no larger with the device attached).



Regarding claim 24, Darley discloses a method comprising: providing a circuit board [Fig. 7; 700] mounting an accelerometer [Fig. 7; 704] on the circuit board at an angle [Fig. 7;  $\Theta$ ], wherein the angle formed between the circuit board and the accelerometer is acute (see Column 8, Line 62 - Column 9, Line 20).

***Claim Rejections - 35 USC § 103***

38. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

39. Claims 4, 7, 9, and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over

***Applicant's Admitted Prior Art (the AAPA) in view of Svancarek et al (6,249,274 B1).***

Regarding claim 4, the AAPA does not expressly disclose the angle formed between the accelerometer chip and the circuit board is 19 degrees.

However, Svancarek discloses the angle formed between an accelerometer chip and a circuit board being 19 degrees (see figures 4A-4C; column 5, line 51 - column 6, line 48 – wherein 19 degrees is within the range between VREST and VG).

The AAPA and Svancarek are analogous art because they are from the shared field of input devices using accelerometers to sense movement. Therefore, it would have been obvious to provide the hand-held device of the AAPA with Svancarek's angled accelerometer technique, so as to sense a wide range of inclination angles.

Additionally, it would have been obvious to one having ordinary skill in the art at the time of invention to use a 19 degree angle with the AAPA's invention, because it would entail:

1. Combining prior art elements according to known methods to yield predictable results.
2. Simple substitution of one known element for another to obtain predictable results.
3. Use of known techniques to improve similar devices (methods or products) in the same way.

4. Applying a known technique to a known device (method or product) ready for improvement to yield predictable results.

5. Choosing from a finite number of identified, predictable solutions (i.e., to would have been obvious to try).

6. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

See KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (U.S. 2007).

Regarding claim 7, this claim is rejected by the reasoning applied in the above rejection of claim 4.

Regarding claim 9, Svancarek discloses a scalability feature is controlled by user input separate from tracked movement of a display device [Fig. 1; 47] (see column 2, line 46 - column 3, line 39).

Regarding claim 10, Svancarek discloses a navigation capability of a physical map includes a scalability feature allowing adjustment of the scalability of the physical map in order to provide a viewer of a display device views of the physical map having different magnifications (see figures 4A-4C; column 5, line 51 - column 6, line 48).

40. Claims 4, 7, 8, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Darley et al (US 6,122,340 A)*.

Regarding claim 4, Darley discloses the angle formed between the accelerometer chip and the circuit board is an acute angle (see Column 9, Lines 5-6). Darley does not expressly disclose the angle formed between the accelerometer chip and the circuit board is 19 degrees. However, 19 degrees is clearly an acute angle.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use any suitable acute angle, such as.... 18° or 19° or 20°, because it is within the general skill of a worker in the art to select a known acute angle on the basis of its suitability and desired characteristics.

A patent claim can be proved obvious merely by showing that the combination of elements was obvious to try. When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense.

See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (U.S. 2007).

Regarding claim 7, this claim is rejected by the reasoning applied in the above rejection of claim 4.

Regarding claim 8, Darley discloses the accelerometer detects acceleration in more than one plane (see Fig. 8; Column 9, Lines 21-44). It would have been obvious to one having ordinary skill in the art to use such a dual acceleration sensing axis type accelerometer at an acute angle to the circuit board, so as to measure acceleration in multiple directions.

Regarding claim 13, Darley discloses the accelerometer chip is capable of sensing motion in more than one plane due to said angle (see Fig. 8; Column 9, Lines 21-44). It would have been obvious to one having ordinary skill in the art to use such a dual acceleration sensing axis type accelerometer at an acute angle to the circuit board, so as to measure acceleration in multiple directions.

41. Claims 5, 9, and 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Darley et al (US 6,122,340 A)* in view of *DeLorme et al (US 5,848,373 A)*.

Regarding claim 5, Darley discloses an orientation of a certain portion displayed is redefined in response to a request by a user (see Column 13, Line 13 - Column 14, Line 25).

Should it be shown that Darley does not teach this feature with sufficient specificity; DeLorme also teaches an orientation of a certain portion displayed is redefined in response to a request by a user (see the Abstract and Column 13, Lines 14-30).

Darley and DeLorme are analogous art, because they are from the shared inventive field of portable LCD display devices presenting information useful to people who are going for a walk or jog. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to provide Darley's wrist LCD with DeLorme's map system, so as to aid the spatial awareness of the user.

Regarding claim 9, Darley discloses a scalability feature is controlled by user input separate from tracked movement of a display device (see Column 6, Lines 17-36).

Should it be shown that Darley does not teach this feature with sufficient specificity; DeLorme also teaches a scalability feature is controlled by user input (see Fig. 11 and Column 35, Lines 37-65).

Regarding claim 10, Darley discloses a navigation capability of a physical map includes a scalability feature allowing adjustment of the scalability of the physical map in order to provide a viewer of a display device views of the physical map having different magnifications (see Column 6, Lines 17-36 -- wherein the device maps and scales via an amplifier the navigational pace of the user).

Should it be shown that Darley does not teach this feature with sufficient specificity; DeLorme also teaches a navigation capability of a physical map includes a scalability feature

allowing adjustment of the scalability of the physical map in order to provide a viewer of a display device views of the physical map having different magnifications (see Fig. 11 and Column 35, Lines 37-65).

### ***Response to Arguments***

42. Applicant's arguments filed 24 January 2008 have been fully considered but they are not persuasive.

The Applicant contends, "*Claim 9 includes the language: the 'scalability feature'. The specification sufficiently describes the language. The specification describes that 'a single accelerometer chip is placed...which allows relative motion to be measured in multiple planes.' See paragraph 7. Moreover, the specification describes that 'motion of a display device controls an object viewer, where the object being viewed is typically essentially stationary...' See paragraph 22. Furthermore, the specification describes that '[m]otion sensing...may be done by a variety of different approaches...' See paragraph 22. Claim 10 includes the language: the 'navigation capability of the physical map.' The specification describes that 'motion of a display device controls an object viewer, where the object being viewed is typically essentially stationary...' See paragraph 22. Furthermore, the specification describes that '[m]otion sensing...may be done by a variety of different approaches...' See paragraph 22"* (see page 5 of the Amendment filed 24 January 2008).

However, the examiner respectfully disagrees on both counts. The Applicant's above quoted arguments evidence there exists no enabling disclosure in the instant specification for the

claimed subject matter of the "*scalability feature*" recited in claim 9; nor the "*navigation capability of the physical map*" recited in claim 10.

No "*scalability*" is anywhere discussed in the instant specification. Furthermore, no "*physical maps*" (never mind "*navigation*" of "*physical maps*") is anywhere discussed in the instant specification.

The Applicant also contends, "*The Applicant's Admitted Prior Art discloses a personal digital assistant. See Fig. 2. Admitted Prior Art discloses that some of the accelerometers must be mounted perpendicular to the circuit board. See paragraph 5. Admitted Prior Art teaches multiple orthogonal accelerometers such as a network of two or three accelerometers. See Fig. 4; paragraph 24. Admitted Prior Art discloses that three accelerometers are required for the X, Y, and Z directions. See paragraph 5*" (see page 6 of the Amendment filed 24 January 2008).

The examiner respectfully notes that the Applicant's admission that "*some of the accelerometers must be mounted perpendicular to the circuit board*" (see page 6, bottom paragraph, lines 2-3 of the Amendment filed 24 January 2008) supports the examiner's reliance upon The Applicant's Admitted Prior Art as grounds for rejection. If "*some of the accelerometers must be mounted perpendicular to the circuit board*" then it must inherently follow that at least one accelerometer must **not** be mounted perpendicular to the circuit board.

The Applicant next contends, "*The applicant respectfully submits that the prior art does not disclose 'an orientation of a certain portion displayed is redefined in response to a request by a user.' at paragraph 18, as the Examiner asserts at page 5 of the Office Action, or anywhere*

*else... Claim 8 includes the language: 'wherein acceleration may be detected in more than one plane of motion.' The Admitted Prior Art discloses multiple accelerometers to detect acceleration in multiple planes. Each of the accelerators detects acceleration in one plane only. Therefore, amended claim 8 is allowable for at least the same reasons as claim 1... Claim 14 includes the language 'wherein the accelerometer produces signals used to control an electrical device.' The Admitted Prior Art discloses a Personal Digital Assistant 20. See Fig. 2; paragraph 17. The Art does not disclose if an accelerometer is used to control the Personal Digital Assistant 20" (see page 7 of the Amendment filed 24 January 2008).*

The examiner respectfully disagrees on all counts.

Regarding claim 5, the AAPA discloses an orientation of a certain portion displayed is redefined in response to a request by a user (see page 6, lines 13-20). The AAPA teaches, "For example, using the pointing device the user can scroll the viewing area by selecting the vertical 38 or horizontal 36 scroll bar" (see page 6, lines 16-17).

Regarding claim 8, the AAPA discloses the accelerometer detects acceleration in more than one plane (see Fig. 4; page 3, lines 1-6). Figure 4 illustrates X, Y, Z arrows forming a positive X-plane, a negative X-plane, a positive Y-plane, a negative Y-plane, and a positive Z-plane, a negative Z-plane. One of the AAPA's accelerometers [Fig. 4; 116] detects acceleration in both the positive X-plane and the negative X-plane (which are divided/separated by the illustrated Y-arrow), for example.

Regarding claim 14, the AAPA discloses the accelerometer produces signals used to control an electrical device [Fig. 2; 20] (see page 6, lines 6-12). The AAPA teaches, "*The processor 110 incorporates an embedded database 120. Coupled to the processor via connection*



*114 are motion sensors 116. Also coupled to the processor via connection 112 is a display device 118" (see page 6, lines 16-17).*

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *"After careful study of the teachings of the Svancarek et al. reference, the applicant has found no teaching of an accelerometer sensing multi-planar motion. Rather, Svancarek et al. teach multiple accelerometers for sensing multi-planar motion. See Col. 6, lines 27-33" -- see page 8 of the Amendment filed 24 January 2008)* are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Applicant next contends, *"Claim 4 includes the language: 'wherein the angle formed between the accelerometer chip and the circuit board is 19 degrees.' The Examiner asserts at page 7 of the Office Action that 'Svancarek discloses the angle formed between an accelerometer chip and a circuit board being 19 degrees.' The applicant respectfully disagrees. Rather, Svancarek et al. disclose, at col. 6, lines 3-13 and fig. 4B, that the vectors VREST and VG form a 90° angle. However, the angle is not an angle between an accelerometer and a circuit board. The applicant is unable to find any teaching in Svancarek et al. regarding the angle between an accelerometer and a circuit board"* (see page 8 of the Amendment filed 24 January 2008).

The examiner respectfully disagrees. Svancarek discloses the angle formed between an accelerometer chip [Fig. 4A; 160] and a circuit board being 19 degrees (see figures 4A-4C;

column 5, line 51 - column 6, line 48 -- wherein 19 degrees is within the range between VREST and VG).

Svancarek expressly discusses tilting the accelerometer between a horizontal rest position [Fig. 4B; VREST = 0 degrees] and a vertical gravity position [Fig. 4B; VG = 90 degrees]. Along the way from 0-to-90 degrees, Svancarek's accelerometer will inherently find itself at 19 degrees (see also Fig. 4C; VACC). The AAPA already teaches the necessary circuitry arrangement. Svancarek is cited merely to evidence that it was known in the art to tilt an accelerometer 19 degrees. It would come as no surprise to an artisan to find an accelerometer positioned at 19 degrees, as instantly claimed. And it would certainly have been within the skill of a typical artisan to mount an accelerometer at 19 degrees relative to a circuit board. See KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (U.S. 2007).

The Applicant contends, "*Claim 9 includes the language: 'wherein the scalability feature is controlled by user input separate from tracked movement of the display device.' Scalability feature is disclosed. Although the Examiner cites Svancarek et al. col. 2, lines 46-col.3, line 30, which describes a general purpose computing device in a traditional personal computer, a scalability feature is not disclosed therein. After careful study of the teachings of Svancarek et al. reference, the applicant has found no teaching of a scalability feature. Therefore, claim 9 is allowable over Svancarek et al. Claim 10 includes the language 'the navigation capability of the physical map includes a scalability feature allowing adjustment of the scalability of the physical map...to provide a viewer of the display device views of the physical map having different magnifications.'* After careful study of the teachings of Svancarek et al. reference, the applicant

*has found neither a scalability feature nor a navigation capability of the physical map. Therefore, amended claim 10 is allowable over the prior art of record.*" (see page 9 of the Amendment filed 24 January 2008).

The examiner respectfully disagrees.

For example, Svancarek teaches an amplifier [Fig. 2; 106] as well as a separate analog to digital converter [Fig. 2; 120] (see column 4, line 6). Both such circuits provide "scalability features" and "magnifications" as instantly claimed.

Svancarek discloses a navigation capability of a physical map includes a scalability feature allowing adjustment of the scalability of the physical map in order to provide a viewer of a display device views of the physical map having different magnifications (see figures 4A-4C; column 5, line 51 - column 6, line 48).

Svancarek teaches, "*A monitor 47 or other type of display device is also connected to the system bus 23 via an interface, such as a video adapter 48*" (see Column 3, Lines 34-39). Clearly, one having ordinary skill in the art would recognize that any image displayed on Svancarek's monitor must inherently be mapped to the appropriate pixel locations, scaled to the fit/drive the screen, and have different magnifications so as to represent the appropriate brightness, contrast, color, etc on the screen.

Applicant's arguments with respect to claims 1-5, 7-10, 13-15, and 22-24 have been considered but are moot in view of the new ground(s) of rejection.

By such reasoning, rejection of the claims is deemed necessary, proper, and are thereby maintained at this time.

***Conclusion***

43. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeff Piziali/  
Primary Examiner, Art Unit 2629  
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